

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 00	SC 0	P 0	L 0	# 632
Thompson, Geoff		GraCaSI S.A.		
Comment Type	TR	Comment Status	R	Big Ticket Item AUI
Draft does not conform to the model shown in Figure 22-1 in that there is no AUI specified.				
SuggestedRemedy				
Include the specification of an AUI to the specification in order to make this new PHY a fully-fledged and compatible member of the family of 10 Mb/s interfaces.				
Response		Response Status	U	
REJECT.				
Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf				

Cl 00	SC 9	P 0	L	# 304
KIM, YONG		NIO		
Comment Type	ER	Comment Status	A	Big Ticket Item Repeaters
CL9 (and CL13 w/ respective consistent texts) starts with a note "NOTE-This repeater is not recommended for new installations. Since September 2011, maintenance changes are no longer being considered for this clause." and overview starts with "This clause specifies a repeater for use with IEEE 802.3 10 Mb/s baseband networks. A repeater for any other IEEE 802.3 network type is beyond the scope of this clause.." 10BASE-T1S with and without PLCA, and 10BASE-T1L relationship with repeater should be stated here or in respective clauses.				
SuggestedRemedy				
Note is a note, i.e. not a part of the standard but informative text. With no maintenance changes being considered for CL9 and CL13, appropriate place to note that 10 Mbps system that uses 10BASE-T1x are not compatible w/ repeaters nor system considerations clauses are relevant may be respective clauses. But do something so that readers get clear direction and don't get confused.				
Response		Response Status	W	
ACCEPT IN PRINCIPLE.				
Task Force agrees that 10BASE-T1L and 10BASE-T1S will not define an AUI or support the use of clause 9 repeaters.				
Editorial license to implement changes in motion 8 from Unconfirmed_minutes_3cg_0918.pdf				

Straw Poll #2: I agree with the following statement:				
A: P802.3cg should define its PHYs to support repeaters and the necessary functionality (e.g., AUI)				
B: P802.3cg should define repeaters as out of bounds for all 10BASE-T1 PHY types				
C: None of the above, but I have an opinion. (something else should be done with regards to repeaters)				
A:6				
B:23				
C:0				
Abstain:9				

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Cl 00 SC 13 P L 3 # 661
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **R** Big Ticket Item Repeaters
 When we added this note we thought we were through with 10 Mb/s and half duplex forever. That appears not to be the case.
 SuggestedRemedy
 Remove the note and update clause 13 appropriately to add 10BASE-T1S as a full fledged member of the 10 Mb/s CSMA/CD family.
 Response Response Status **U**
 REJECT.
 Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

Cl 01 SC 1.4 P 24 L 15 # 265
 KIM, YONG NIO
 Comment Type **TR** Comment Status **A** General
 says ..up to at least 1000 m reach while the line 18 (T1S) does not say ..up to at least 25 m reach. Make them consistent.
 SuggestedRemedy
 Most MAUs do not state reach (due to all other relevant media spec dependancies), but some do. Do what make sense and defend it.
 Response Response Status **U**
 ACCEPT IN PRINCIPLE.
 Reach should be specified by 10BASE-T1S and 10BASE-T1L. Accommodated by #368. No additional change required.
 Resolution to comment 368 adds reach information to the definition of 10BASE-T1S.

Cl 22 SC 22 P 25 L 1 # 658
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **R** Big Ticket Item PLCA
 The proposed changes in this clause are at odds with the statement in the approved criteria on compatibility that states "As a PHY amendment to IEEE Std 802.3, the proposed project will use (the existing) MII"
 SuggestedRemedy
 Remove clause 148 and related text from the draft. If PLCA is desired as an addition to the standards family it should be placed appropriately at MAC Control or higher within the layer structure and have its own CFI.
 Response Response Status **U**
 REJECT. Group to discuss.
 Straw Poll: Reject comment #658 because 1) PLCA is compatible and operates with the CSMA CD MAC, not as a MAC function and 2) PLCA operates as a reconciliation sublayer and does not change the PLS service primitives.
 Y: 27
 N: 2
 A: 7

Cl 22 SC 22.2.2.4 P 25 L 13 # 292
 KIM, YONG NIO
 Comment Type **TR** Comment Status **R** PLCA
 The strike outs "Other. shall have no effect upon the PHY". This proposed change could potentially make existing systems non-compliant. So this potentially violates CRD (compatibility) and may cause other issues.
 SuggestedRemedy
 please fix it.
 Response Response Status **W**
 REJECT.
 This text has not been deleted. An additional pair of TXD values have been inserted, which result in the text being moved to page 25, line 21 of draft 2.0.

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Cl 22 SC 22.2.2.4 P 25 L 18 # 293
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA

Unlike LPI that is defined and referenced, PLCA, Beacon, Commit are not. And there is no reference and context wrt "capability is supported and enabled".

SuggestedRemedy

please fix so that readers of (proposed and revised) CL22 could make sense of new proposed terms. Look how LPI did it. Fairly pervasive changes are required to convey the proposed change.

Response Response Status W

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_22_r2p0_resolution.pdf. Changes are marked with #293 in the right boxes

Cl 22 SC 22.2.2.4 P 25 L 22 # 294
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

The sentence "Other.shall.. upon the PHY"

SuggestedRemedy

Unneecessary text. But if you feel it is necessary, define what "shall have no effect" means, so that it could be added to the PICS and tested.

Response Response Status W

REJECT.

This is not new text. It is present in clause 22.2.2.4 of 802.3-2018. Removing this sentence may cause backward compatibility issues.

An additional pair of TXD values have been inserted, which result in the text being moved to page 25, line 21 of draft 2.0.

Cl 22 SC 22.2.2.5 P 25 L 46 # 295
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

The proposed sentence "Assertion of the TX_ER signal shall not affect.".potentially make existing systems non-compliant. So this potentially violates CRD (compatibility) and may cause other issues.

SuggestedRemedy

please fix it.

Response Response Status W

REJECT.

No change is being made to the original clause 22 "shall not affect" text. The modification is the addition of "(with the exception of 10BASE-T1S and 10BASE-T1L)". The idea, which has been discussed in the group, is that we don't want to preclude using TX_ER with new 10BASE-T PHYs, so an exception has been added.

Cl 22 SC 22.2.2.8 P 26 L 5 # 296
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA

Similar to my comment on 22.2.2.4. Unlike LPI that is defined and referenced, PLCA, Beacon, Commit are not.

SuggestedRemedy

please fix so that readers of (proposed and revised) CL22 could make sense of new proposed terms. Look how LPI did it. Fairly pervasive changes are required to convey the proposed change.

Response Response Status W

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_22_r2p0_resolution.pdf. Changes are marked with #296 in the right boxes.

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 22 SC 22.2.2.11 P 26 L 33 # 297
KIM, YONG NIO

Comment Type **TR** Comment Status **A** *PLCA*

The proposed new paragraph has optional behavior that may or may not occur. This text does not belong in CL22.

SuggestedRemedy

Please remove the proposed text, or if required, put appropriate missing text WRT its relevancy (actions, signals, etc).

Response Response Status **W**

ACCEPT IN PRINCIPLE.

This text has been deleted by changes marked #649 in Clause_22_r2p0_resolution.pdf.

Cl 22 SC 22.2.2.12 P 26 L 42 # 298
KIM, YONG NIO

Comment Type **TR** Comment Status **R** *PLCA*

Similar to my comment on 22.2.11. The proposed new paragraph has optional behavior that may or may not occur. This text does not belong in CL22.

SuggestedRemedy

Please remove the proposed text, or if required, put appropriate missing text WRT its relevancy (actions, signals, etc).

Response Response Status **W**

REJECT.

Actions and signals are described in clause 148.4.4.1.3, which is referenced by 22.2.2.11 as appropriate.

Cl 30 SC 30.2.1 P 30 L 25 # 301
KIM, YONG NIO

Comment Type **TR** Comment Status **A** *Management*

oPLCA 30.3.9 block is misplaced. It is mutually exclusive with oMACMergeEntity and oOMPEmulation and possibly others.

SuggestedRemedy

Please fix it so that they are not mutually exclusive with compatible entities.

Response Response Status **W**

ACCEPT IN PRINCIPLE.

Move oPLCA under oPHYentity in Figure 30-3

Jon Lewis to implement change.

Cl 30 SC 30.2.2.1 P 30 L # 302
KIM, YONG NIO

Comment Type **TR** Comment Status **A** *Management*

oPLCA would need an entry in CL30.2.2.1. Otherwise the draft is incomplete.

SuggestedRemedy

Please fix it.

Response Response Status **W**

ACCEPT IN PRINCIPLE.

Bring 30.2.2.1 into the draft
Add the following:

"Insert oPLCA after the description of oPD as follows:

oPLCA If implemented, oPLCA is contained within oPHYEntity. The oPLCA managed object class provides the management controls necessary to allow an instance of a PLCA RS to be managed."

Cl 30 SC 30.2.5 P 30 L # 303
KIM, YONG NIO

Comment Type **ER** Comment Status **A** *Management*

Table 30-1a would need an entry for oPLCA under DTE. Otherwise the draft is incomplete.

SuggestedRemedy

Please fix it.

Response Response Status **W**

ACCEPT IN PRINCIPLE.

Accommodated by #32.

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

CI 30 SC 30.3.9.1.1 P 31 L 33 # 305
KIM, YONG NIO

Comment Type TR Comment Status A Management

States "...A disabled PLCA utilizes Clause 22 reconciliation sublayer without modification. An enabled PLCA modifies the behavior of the reconciliation sublayer per Clause 148" but Clause 22 is already proposed to be modified with PLCA states and signals. If the intention is to leave CL22 as-is, this draft should not make any modification to CL22 and make this statement. Or do what was intended. Current text does not work (not clear).

SuggestedRemedy

Please fix it.

Response Response Status W

ACCEPT IN PRINCIPLE.

Replace "A disabled PLCA utilizes Clause 22 reconciliation sublayer without modification. An enabled PLCA modifies the behavior of the reconciliation sublayer per Clause 148."

with
"When PLCA is enabled, the reconciliation sublayer is as defined by Clause 148, otherwise, Clause 148 behavior is not enabled."

(note this should not say "clause 22 behavior is performed" because it needs also to apply to non-clause 22 and non-clause 148 situations...)

CI 30 SC 30.3.9.2.1 P 31 L 43 # 306
KIM, YONG NIO

Comment Type TR Comment Status A Management

"Same as aPLCAAdminState" is not appropriate.

SuggestedRemedy

Please be verbose.

Response Response Status W

ACCEPT IN PRINCIPLE.

Replace, "Same as aPLCAAdminState"

with, "An ENUMERATED VALUE that has the following entries: disabled enabled"

CI 30 SC 30.3.9.2.1 P 31 L 47 # 307
KIM, YONG NIO

Comment Type TR Comment Status A Management

"PLCA" does not seem to be the right in "Setting PLCA to the enabled state". Is PLCA a layer or managed object or something else?

SuggestedRemedy

Please use consistent object, or (re-)define PLCA to be consistent.

Response Response Status W

ACCEPT IN PRINCIPLE.

Replace, "Setting PLCA to the enabled state"

with, "Setting acPLCAAdminControl to the enabled state"

CI 30 SC 30.3.9.2.2 P 31 L 52 # 308
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

"Sublayer provided the PHY implements and enables optional Clause 147 PLCA " is not right. PLCA is an optional component to RS as proposed, and is NOT a part of PHY

SuggestedRemedy

Please reference correct layers

Response Response Status U

ACCEPT IN PRINCIPLE.

Accomodate by #595.

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CI 30 SC 30.3.9.2.3 P 32 L 11 # 309
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA

aPLCAMaxID -- does not have a range, so am I to read this as Max ID = <integer max value>? Is this max # of nodes consistent w/ PLCA clause, and is it get-set or just get? And why would this object be needed for each DTE?

SuggestedRemedy

Please clarify (range) and justify (why needed for each DTE)

Response Response Status W

ACCEPT IN PRINCIPLE.

Change "INTEGER" at 32/16 to "INTEGER VALUE in the following range (inclusive): 0-255"

Change "INTEGER" at 32/27 to "Same as aPLCAMaxID"

Add the following value after "The value of aPLCALocalNodeID is assigned to define the ID of the local node on the PLCA network.",

"Value must be in the range of [0, aPLCAMaxID] (inclusive)."

CI 30 SC 30.3.9.2.4 P 32 L 22 # 311
KIM, YONG NIO

Comment Type TR Comment Status A Management

There is no description on how NodeID=0 is assigned (or elected). How each NodeID is assured to be unique. How duplicate NodeID (error condition) is handled.

SuggestedRemedy

Please add details or references to these behaviors.

Response Response Status W

ACCEPT IN PRINCIPLE.

Accommodated by #598 which specifies locally unique NodeID within a collision domain.

Description or requirements of assignment of parameters in the management entity is beyond the scope of this standard.

CI 30 SC 30.3.9.2.5 P 32 L 41 # 312
KIM, YONG NIO

Comment Type TR Comment Status A Management

Is aPLCATransmitOpportunityTimer object get or get-set? What are the allowed ranges of values, and what is the unit for these values. This object definition is incomplete.

SuggestedRemedy

Please add details and add appropriate references.

Response Response Status W

ACCEPT IN PRINCIPLE.

Insert "aPLCATransmitOpportunity maps to the duration of the timer TO_TIMER. The value of aPLCATransmitOpportunity is an integer number between 1 and 65535, expressed as a the duration of TO_TIMER in bit times. See 148.4.5.4 for further information." after "transmit opportunities." on page 32, line 42.

CI 30 SC 30.5.1.1.4 P 33 L 47 # 313
KIM, YONG NIO

Comment Type TR Comment Status R Big Ticket Item AUI

If 10BASE-T1S PHY supports CSMA/CD, then it should operate similarly to 10BASE5, etc WRT to MAU not available/available as stated in second paragraph.

SuggestedRemedy

Please add appropriate references of media loopback. Current references are only to AUI

Response Response Status W

REJECT.

Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

CI 30 SC 30.5.1.1.6 P 33 L # 314
KIM, YONG NIO

Comment Type TR Comment Status A Jabber

Jabber function that protects mixing segment is missing.

SuggestedRemedy

Please add in CL147 and also here for its mgmt.

Response Response Status W

ACCEPT IN PRINCIPLE.

Accommodated by #534

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Cl 45 SC 45.2.1.174a P 36 L 34 # 316
KIM, YONG NIO

Comment Type ER Comment Status R Registers

Low power ability is missing perhaps, before it could be controlled?

SuggestedRemedy

Is low-power mode a mandatory requirement? If so, provide a reference.

Response Response Status W

REJECT.

Low power ability corresponding to the control bit at 45.2.1.174a is found at bit 1.2295.8 in Table 45-142b.

Cl 45 SC 45.2.1.174a P 36 L 36 # 317
KIM, YONG NIO

Comment Type TR Comment Status A EEE

EEE capability is optional. Clarify what happens if this bit = 1 when the corresponding ability is 0

SuggestedRemedy

Clarify.

Response Response Status W

ACCEPT IN PRINCIPLE.

Accommodated by #719.

Cl 45 SC 45.2.1.174a.5 P 37 L 30 # 269
KIM, YONG NIO

Comment Type TR Comment Status R Registers

"This action may also initiate. in the same package" is not appropriate in so many levels.
Delete

SuggestedRemedy

Delete the sentence and make changes to any related text elsewhere.

Response Response Status W

REJECT.

This exact same language is found 6 different times in connection with the low power mode of other 802.3 phys in IEEE Std 802.3-2018.

Cl 45 SC 45.2.1.174a.5 P 37 L 32 # 270
KIM, YONG NIO

Comment Type TR Comment Status R Registers

"The behavior of the. shjould not be relied upon" is not appropriate. Having a control defined for a purpose, low power mode, and having no specification tells me that this is purely vendor implementation paramter.

SuggestedRemedy

Delete the sentence and make changes to any related text elsewhere.

Response Response Status W

REJECT.

This exact same language is found 6 different times in connection with the low power mode of other 802.3 phys in IEEE Std 802.3-2018.

Cl 45 SC 45.2.1.174c P 40 L 3 # 635
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A Registers

THE TEXT: "The 3 default values for each bit should be chosen so that the initial state of the device upon power up or reset is a 4 normal operational state without management intervention." is an editorial note requiring further definition of the draft. It indicates that the draft was not complete and not qualified for WG ballot.

SuggestedRemedy

Complete definition of these default values as well as other incomplete items. This constitutes a lack of completeness of the draft, restart the initial WG Ballot.

Response Response Status U

ACCEPT IN PRINCIPLE.

No change to draft required.

Table 45-142c clearly shows that 0 0 0 for bits 1.2298.15:13 are Normal (non-test) operation. And 45.2.1.174c.1 clearly states, "The default value for bits 1.2298.15:13 is zero."

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Cl 45 SC 45.2.1.174d P 40 L 44 # 268
 KIM, YONG NIO

Comment Type **TR** Comment Status **A** Mixing Segment

Multidrop mode is not clear. If the TX or RX characteristics change, then it may be clearer to provide control around TX or RX parameters. Multidrop mode seems to indicate MAC/RS type of layer function.

SuggestedRemedy
 Please use more direct parameter name as appropriate.

Response Response Status **U**
 ACCEPT IN PRINCIPLE.

Add "(see Clause 147)" after "multidrop mode over a mixing segment network" in paragraph 45.2.1.174d.5 at P41 L51.

Cl 45 SC 45.2.1.174e P 42 L 21 # 271
 KIM, YONG NIO

Comment Type **TR** Comment Status **A** Registers

Multidrop mode is not clear. If the TX or RX characteristics change, then it may be clearer to provide control around TX or RX parameters. Multidrop mode seems to indicate MAC/RS type of layer function.

SuggestedRemedy
 Please use more direct parameter name as appropriate.

Response Response Status **W**
 ACCEPT IN PRINCIPLE.

Add "(see Clause 147)" after "multidrop mode over a mixing segment network" in paragraph 45.2.1.174e.4 at P42 L52.

Cl 45 SC 45.2.3.58a P 45 L 12 # 272
 KIM, YONG NIO

Comment Type **TR** Comment Status **R** Registers

"10BASE-T1L PCS shall be placed." "10BASE-T1L shall accept.". are not right -- loopback ability seems optional. Also a "shall accept data" -- what does it mean to "accept data"?

SuggestedRemedy
 Please correct and clarify.

Response Response Status **W**
 REJECT.

The text "PCS shall be placed..." (referring to loopback modes) occurs 10 times in IEEE Std 802.3-2018 and is the normal way of referring to this operation. "shall accept data on the transmit path... And return it on the receive path" occurs 19 times to further describe loopback.

Cl 45 SC 45.2.3.58c P 47 L 19 # 274
 KIM, YONG NIO

Comment Type **TR** Comment Status **R** PLCA

If PLCA network does not work with repeaters, and a single multiple access segment cannot go beyond <nn> of nodes, why is the field much greater than necessary? It would be appropriate to set the value range to be the same as the actual segment max, and set the rest of the bits as reserved.

SuggestedRemedy
 Please do so.

Response Response Status **W**
 REJECT.

PLCA does not have a maximum size specified in Clause 148.

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Cl 45	SC 45.2.3.58c	P 47	L 25	# 273
KIM, YONG		NIO		
Comment Type	TR	Comment Status	A	PLCA
Does the network segment work fine when nodes initialize with all defaults (in this case nodeID=255)? If so, then please explain how it works in CL147. If not, please explain why the default value matter.				
SuggestedRemedy				
Please reference appropriate part of CL147 that describes NodeID=255 default operation, or delete, or add other clarifications needed.				
Response		Response Status	W	
ACCEPT IN PRINCIPLE.				
Replace "The default value of bits 3.2289.7:0 is 255." with, "The configuration of local_nodeID is beyond the scope of this standard. When PLCA operation is disabled these values have no effect."				

Cl 45	SC 45.2.3.58d.1	P 47	L 44	# 275
KIM, YONG		NIO		
Comment Type	TR	Comment Status	R	PLCA
Default value of 20 bit times seems excessive for system that initialize with the value, when E2E delay for 25 m is 1.25 BT. Adding RX latency (148.4.5.1) delta, which is not spec'ed but the worst case (one could be at 0 us and another could be at 4 us in 147.11) the value could be 41.25 us for 25 m segment. None of these equate to 20 bit times default.				
SuggestedRemedy				
Please spec appropriate default for system operation when systems initialize from default.				
Response		Response Status	W	
REJECT.				
Commenter does not provide sufficient remedy. The default value for PLCA TO_TIMER was considered by the Task Force.				

Cl 45	SC 45.2.3.58e.3	P 48	L 45	# 276
KIM, YONG		NIO		
Comment Type	TR	Comment Status	A	Big Ticket Item PLCA_EN
PLCA is not a part of PCS. Need to move this bit to appropriate layer (RS) register				
SuggestedRemedy				
Please do so.				
Response		Response Status	W	
ACCEPT IN PRINCIPLE.				
Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.				
Implement changes marked with #276 in http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf				

Cl 45	SC 45.2.3.58e.4	P 48	L 50	# 277
KIM, YONG		NIO		
Comment Type	TR	Comment Status	A	Big Ticket Item PLCA_EN
PLCA is not a part of PCS. Need to move this bit to appropriate layer (RS) register				
SuggestedRemedy				
Please do so.				
Response		Response Status	W	
ACCEPT IN PRINCIPLE.				
Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.				
Implement changes marked with #277 in http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf				

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Cl 45 SC 45.2.3.58f.1 P 49 L 27 # 278
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA_EN

PLCA is not a part of PCS. Need to move this bit to appropriate layer (RS) register

SuggestedRemedy

Please do so.

Response Response Status W

ACCEPT IN PRINCIPLE.

Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.

Implement changes marked with #278 in
http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf

Cl 45 SC 45.2.145.2 P 35 L # 315
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

Without regard to my other comment on PLCA in RS layer, PLCA presence should be a part of the Table 45-2 but is missing.

SuggestedRemedy

Please add PLCA as stated (unless PLCA function is deleted from the draft).

Response Response Status W

ACCEPT IN PRINCIPLE.

Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.

Implement changes marked with #315 in
http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf

Cl 78 SC 78.2 P 57 L 41 # 279
KIM, YONG NIO

Comment Type TR Comment Status R Power

Obvious omission of 10BASE-T1S entry.. Why is it not listed? Objectives list still shjows optional EEE. 147.1 says "DME-based 10BASE-T1S is silent during idle symbols making it inherently energy efficient and without the need for a separate low-power-idle (LPI) mode, as is defined in Clause 78".

SuggestedRemedy

Please complete it. Or change the adopted objectives to reflect the draft.

Response Response Status W

REJECT.

Master comment 711. Resolve with 711, 432, and 280.

As per clause 147.1, 3rd paragrap "DME-based 10BASE-T1S is silent during idle symbols making it inherently energy efficient and without the need for a separate low-power-idle (LPI) mode, as is defined in Clause 78". Hence LPI signalling is not used/applicable for 10BASE-T1S.

Cl 78 SC 78.5 P 58 L 15 # 280
KIM, YONG NIO

Comment Type TR Comment Status R Power

Obvious omission of 10BASE-T1S entry.. Why is it not listed? Objectives list still shjows optional EEE. 147.1 says "DME-based 10BASE-T1S is silent during idle symbols making it inherently energy efficient and without the need for a separate low-power-idle (LPI) mode, as is defined in Clause 78".

SuggestedRemedy

Please complete it. Or change the adopted objectives to reflect the draft.

Response Response Status W

REJECT.

Master comment 711. Resolve with 711, 432, and 279.

As per clause 147.1, 3rd paragrap "DME-based 10BASE-T1S is silent during idle symbols making it inherently energy efficient and without the need for a separate low-power-idle (LPI) mode, as is defined in Clause 78". Hence LPI signalling is not used/applicable for 10BASE-T1S.

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CI 98 SC 98.2.1.1.2 P 59 L 16 # 281
KIM, YONG NIO

Comment Type TR Comment Status R Big Ticket Item AutoNeg

PHY operates at 10 Mbps onto medium that supports 10 MBps. If the autonegotiation (high speed mode) operates at 16.667 Mb/s, it begs the question why the PHY is not operating at 16.667Mbps. Conversely, getting PHY + Medium to work reliably at 16.667 Mb/s just for the high speed mode not seem useful.

SuggestedRemedy

Delete high speed mode.

Response Response Status W

REJECT.

High speed mode is the legacy mode for clause 97 and 98 PHYs. This amendment added low speed mode for exactly the reason the commenter stated.

Low Speed Mode is added to enable multi-mode PHYs incorporating 10BASE-T1L as well as 10BASE-T1S to switch. See discussion at http://www.ieee802.org/3/cg/public/adhoc/brandt_012517_3cg_01_adhoc.pdf, http://www.ieee802.org/3/cg/public/Sept2017/Gottron_3cg_01a_0917.pdf, and http://www.ieee802.org/3/cg/public/Nov2017/Graber_3cg_16a_1017.pdf.

CI 147 SC 147 P 145 L 1 # 659
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item AUI

There is no AUI defined in the draft. The AUI is an essential element of all 802.3 10 Mb/s PHY specifications. This is particularly true in the case of half duplex applications where it is used as a timing test point for calculating the delay used in CSMA/CD round trip timing sums (Ref: Table 4-2). An AUI definition point is also needed (even if it never appears externally on a piece of equipment) in order to be able to include the cl. 9 repeater in networking configurations. Even though (almost) no one else remembers it or thinks it is relevant, the c. 9 repeater is a valuable tool in the network kit. It has a very, very low transistor count when compared to a bridge and much lower delay (~ 9 bit times) and jitter (not dependent on packet length) such that it is a superior element for time sensitive applications in terms of cost and performance.

SuggestedRemedy

Define and specify the AUI (no connector specification required) for the 10BASE-T1S PHY for use as a functional test point, a timing test point and a standardized element edge for IP implementations of the PHY.

Response Response Status U

REJECT.

Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

CI 147 SC 147.1 P L 22 # 637
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item PLCA_SCOPE

The inclusion of PLCA in this project is (1) a layer violation and (2) out of scope for a Physical Layer project according to clause 1.1 of the standard. Inclusion of PLCA conflicts with paragraph 3 of the responses to the "Compatibility" criteria of the CSD.

SuggestedRemedy

Remove this paragraph from the draft and related text from this project. If PLCA is desired as an addition to the standards family it should be placed appropriately within the layer structure and have its own CFI.

Response Response Status U

REJECT.

PLCA maps existing MAC PLS primitives to MII, which is in-line with what an RS is supposed to do. PLCA is defined as a reconciliation sublayer, which has been considered part of a Physical Layer specification project. As long as this is the case, the text belongs in the subclause.

Straw Poll: I support rejecting this comment with the rationale above.

Y:25

N: 1

A: 5

CI 147 SC 147.1.1 P L 26 # 638
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item AUI

The text and Fig 147-1 do not align to Fig 1-1 of the standard which is intended to comprehensively cover 802.3.

SuggestedRemedy

Remove Fig 147-1 and reference Fig 1-1 or duplicate the 10 Mb/s portion of 1.1 here. Alter the implementation of 10BASE-T1S to align to the 1.1 model.

Response Response Status U

REJECT.

Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

CI 147 SC 147.1.1 P 145 L 30 # 282
KIM, YONG NIO

Comment Type TR Comment Status A General

AN is not defined for 10BASE-T1S PHY in HD in multidrop mode. How does PHY know it's in that mode? What happens one PHY is not in multidrop mode, connected to the multidrop segment, or connected with null segment? Management is optional. Duplexness is associated with MAC

SuggestedRemedy

Please clarify.

Response Response Status W

ACCEPT IN PRINCIPLE.

Replace,

"Auto-Negotiation for 10BASE-T1S is defined in Clause 98. MII is defined in Clause 22. Auto negotiation is not defined for 10BASE-T1S PHY operating in half-duplex multidrop mode."

with,

"Auto-Negotiation for 10BASE-T1S is defined in Clause 98 and available only while not in multidrop mode. Selection between multidrop and point-to-point mode is made via the appropriate configuration bit. Optional MDIO is defined in Clause 45. Management is not optional. MII is defined in Clause 22."

CI 147 SC 147.2 P GraCaSI S.A. L 34 # 642
Thompson, Geoff

Comment Type TR Comment Status R Big Ticket Item Primitives

The claim is that this PHY uses the MII, the reference to 40.2 is to the GMII

SuggestedRemedy

Change the reference to an MII clause and use the same primitives as existing 10/100 PHYs without alteration.

Response Response Status U

REJECT.

The reference is identical to that in c96 100BASE-T1. This is a reference to "Service primitives and interfaces", not MII.

Straw poll to reject comment with the above rationale:

Y: 9

N: 0

A: 21

CI 147 SC 147.3.1 P L 3 # 643
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A EZ

It is not clear from the description whether "PCS Reset" produces a level or a pulse on its output. i.e. does it take a !PCS Reset to complete the reset and release the device for operation.

SuggestedRemedy

Clarify

Response Response Status U

ACCEPT IN PRINCIPLE.

WORK WITH PIER ON THIS

Change this:

====

PCS reset initializes all PCS functions. The PCS Reset function shall be executed whenever one of the following conditions occur:

a) Power on (see 36.2.5.1.3).

B) The receipt of a request for reset from the management entity.

PCS Reset shall set pcs_reset = ON while any of the above reset conditions holds true. All state diagrams take the open-ended pcs_reset branch upon execution of PCS Reset. The reference diagrams do not explicitly show the PCS Reset function.

====

to this:

====

PCS reset initializes all PCS functions. The PCS Reset function shall be executed whenever any of the following conditions occur:

a) Power on causes power_on = TRUE (see 36.2.5.1.3) while pcs_reset = OFF.

B) The receipt of a request for reset from the management entity (see 3.2291.15 in 45.2.3.58e.1), independently from the current state of pcs_reset.

All state diagrams take the open-ended pcs_reset branch upon execution of PCS Reset.

PCS Reset shall keep pcs_reset = ON until the complete execution of the PCS Reset function, after which it is set to pcs_reset = OFF. The reference diagrams do not explicitly show the PCS Reset function.

====

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 147 SC 147.3.2.2 P L 44 # 645
 Thompson, Geoff GraCaSI S.A.

Comment Type **TR** Comment Status **R** Big Ticket Item PLCA_SCOPE
 PLCA is out of scope for this project and a layer violation for a PHY project.

SuggestedRemedy
 Remove this variable and its descriptive paragraph.

Response Response Status **U**
 REJECT.

See comment #637 for rationale.

Cl 147 SC 147.3.2.2 P L 50 # 646
 Thompson, Geoff GraCaSI S.A.

Comment Type **TR** Comment Status **R** Big Ticket Item PLCA_SCOPE
 PLCA is out of scope for this project and a layer violation for a PHY project.

SuggestedRemedy
 Remove the remainder of PCLA from this project draft.

Response Response Status **U**
 REJECT.

See comment #637 for rationale.

Cl 147 SC 147.3.2.2 P 149 L 44 # 283
 KIM, YONG NIO

Comment Type **TR** Comment Status **A** Big Ticket Item PLCA
 PLCA is not a part of PCS. It is a part of RS (CL 148). Why are plca_en and other signals are defined and used in CL147 PHY specification, i.e. Fig 147-4 PCS TX state diagram line 11? As per "When PLCA capability is supported and enabled, the RS shall use the combination of TX_EN deasserted, TX_ER asserted, and TXD<3:0> equal to 0010 or 0011 as shown in Table 22-1 to send respectively a BEACON or a COMMIT request as explained in Clause 148." the TX state diagram could just be tx_sym <=tx_cmd in SILENT state.

SuggestedRemedy
 Eliminate plca related signal use here and everywhere else in this clause (CL147). Let RS layer do its thing, and let PCS and PMA in the PHY do their thing.

Response Response Status **W**
 ACCEPT IN PRINCIPLE.

Implement changes in Clause 147_r2p0_resolution.pdf tagged with comment #283.

Changes include revising the state machine and deleting plcs_en.

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 147 SC 147.3.5 P L 10 # 648
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item Repeaters
 Collision detect as described here purports to detect a collision between this station and one other station. It does not describe any way to detect a collision between any other two or more stations.

SuggestedRemedy
 Add collision detection based on energy received. Lack of this aspect constitutes a lack of completeness in the basic function of the specified device and therefore the draft. Restart the initial WG Ballot.

Response Response Status U
 REJECT.
 PHYs detect activity on the bus, specific detection of collision is not required, nor is the method.

Commenter indicates that his concern is reliable detection of activity with an arbitrary number of transmitters.

Straw Poll:
 I support:
 REJECT - PHYs detect activity on the bus, specific detection of collision is not required, nor is the method.
 Y:7
 N:2
 A:11

I support:
 ACCEPT. (commenter's proposed resolution is: Add collision detection based on energy received. Restart the initial WG Ballot.)
 Y:0
 N:9

TFTD

Cl 147 SC 147.3.7 P L 1 # 650
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE
 PLCA is out of scope for this project and a layer violation for a PHY project.

SuggestedRemedy
 Remove the entirety of cl. 147.3.7.

Response Response Status U
 REJECT.

See comment #637 for rationale.

Cl 148 SC 148 P 173 L # 287
 KIM, YONG NIO

Comment Type TR Comment Status A PLCA
 CL 4.3.3 variable definition of carrierSense is in conflict with how CL173 PLCA is using carrier sense. "The overall event of activity on the physical medium is signaled to the MAC sublayer by the variable carrierSense". And "var carrierSense: Boolean;
 In half duplex mode, the MAC sublayer shall monitor the value of carrierSense to defer its own transmissions when the medium is busy. The Physical Layer sets carrierSense to true immediately upon detection of activity on the physical medium. After the activity on the physical medium ceases, carrierSense is set to false. Note that the true/false transitions of carrierSense are not defined to be precisely synchronized with the beginning and the end of the frame, but may precede the beginning and lag the end, respectively. (See 4.2 for details.) In full duplex mode, carrierSense is undefined." CL173 use of carrier sense is in conflict w/ CL4. These conflicted use are pervasive, e.g. CL148.4.6.1 holds carrier_on active even when there is no activity on the physical medium.

SuggestedRemedy
 Either include CL4 carrier sense related maintenance changes as a part of PLCA, or change PLCA to work with CL4 carrier sense as defined.

Response Response Status W
 ACCEPT IN PRINCIPLE.

Accommodated by #649.

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 148 SC 148 P 173 L 1 # 656
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE

The inclusion of PLCA in this project is (1) a layer violation and (2) out of scope for a Physical Layer project according to clause 1.1 of the standard. Inclusion of PLCA conflicts with paragraph 3 of the responses to the "Compatibility" criteria of the CSD.

SuggestedRemedy

Remove clause 148 and related text from the draft. If PLCA is desired as an addition to the standards family it should be placed appropriately within the layer structure and have its own CFI.

Response Response Status U

REJECT.

See comment #637 for rationale.

Cl 148 SC 148.1 P 173 L 10 # 599
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

says "MII. are compatible with the gRS. ". The statement may become true if all appropriate changes to CL22 are made to ensure this statement to be true. CL22 conveys PLS signals to MII. CL148 performs medium access control. So they are not compatible prior to changes.. Also not clear is what is being conveyed as "compatible".

SuggestedRemedy

Delete the sentence, and any other occurrence of similar statement. If this statement is kept (against this comment), clarify what is meant to be "compatible"

Response Response Status W

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #comment number in the right boxes.

Cl 148 SC 148.1 P 173 L 14 # 657
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A ig Ticket Item PLCA_SCOPE

According to this text, "PLCA is designed to work on top of CSMA/CD". Therefore it is mispositioned in the stack by being placed within the PHY which is below the CSMA/CD mechanism.

SuggestedRemedy

Remove clause 148 and related text from the draft. If PLCA is desired as an addition to the standards family it should be placed appropriately at MAC Control or higher within the layer structure and have its own CFI.

Response Response Status U

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #657 in the right boxes.

NOTE: Intention was to specify that PLCA is not a replacement of CSMA/CD but instead it's a method that works in conjunction with CSMA/CD functions.

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

CI 148 SC 148.1 P 173 L 15 # 284
KIM, YONG NIO

Comment Type TR Comment Status A ig Ticket Item PLCA_SCOPE

"PLCA is designed to work on top of CSMA/CD and can be dynamically enabled or disabled via management interface. When disabled, the system operates as specified in Clause 22." makes no sense. Second sentence - CL22 has been modified to add PLCA support. First sentence -- it does NOT work on top of CSMA/CD. PLCA uses Carrier sense and collision detect in completely different manner to perform alternative media access method.

SuggestedRemedy

Delete paragraph (both sentences), or make it technical correct.

Response Response Status W

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #284 in the right boxes.

Notes:

WRT "When disabled, the system operates as specified in Clause 22" - CL22 has been modified to add PLCA support: Modifications to Clause 22 are not in effect when PLCA is not supported or not enabled. This is clearly stated in references text.

WRT to "PLCA is designed to work on top of CSMA/CD", this is resolved by #657

WRT to "PLCA uses Carrier sense and collision detect in completely different manner to perform alternative media access method":
Carrier Sense has been used in other 802.3 standards to prevent MAC from transmitting, even when the medium is not busy. See also #287.

CI 148 SC 148.2 P 173 L 25 # 286
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

"..round-robin fashion every time the PHY with node ID = 0 signals a BEACON on the medium, indicating the start of a new cycle" -- this specification does not describe how a node ID=0 is selected (or elected), and how the system handles duplicate node id=0 or absence of node id=0. Also not specified are node id conflict (duplicate node id s)

SuggestedRemedy

The draft is not complete without these specifications. Specify these to complete the spec. Ethernet std has management optional, config rules are known, and required protocol to config are specified (e.g. channel training)

Response Response Status W

REJECT.

No consensus to change

Commenter is referred to comment 598 with respect to node ID assignment and management operation.

CI 148 SC 148.2 P 173 L 29 # 285
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

"a multidrop network is granted, in turn, a single transmit opportunity" makes little sense.

SuggestedRemedy

Either clarify or delete.

Response Response Status W

ACCEPT IN PRINCIPLE.

Accommodated by #505.

CI 148 SC 148.4.1.1 P 175 L 6 # 288
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

The Figure 148-2 does not belong in CL148. If it becomes desirable to have it, it should be added to CL22 and reviewed for generic model correctness. CL22.1.1 lists summary of major concepts, gRS should be consistent with that

SuggestedRemedy

Delete, or move it to CL22 with modifications to align it to CL22.1.1

Response Response Status W

REJECT.

The purpose of a RS is to specify mapping between MAC PLS primitives and MII signals, so the figure belongs to C148 which is an RS. See also Figure 90-2 (TSSI).

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

CI 148 SC 148.4.2 P 176 L # 290
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

PLCA is not a generic RS.

SuggestedRemedy

Please correct and clarify.

Response Response Status W

REJECT.

PLCA is contained within the generic RS as shown in Figure 148-3. Commenter did not provide sufficient explanation or remedy.

Straw poll reject comment with rationale above:

Y: 14

N: 0

A: 13

CI 148 SC 148.4.2 P 176 L # 289
KIM, YONG NIO

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE

RS is defined in CL1 "1.4.425 Reconciliation Sublayer (RS): A mapping function that reconciles the signals at the Media Independent Interface (MII) to the Media Access Control (MAC)-Physical Signaling Sublayer (PLS) service definitions. (See IEEE Std 802.3, Clause 22.)", and consistent with CL22.1.1. Even when MII signals are used to convey signals for EEE, it is still performing reconciliation. PLCA is using signals in RS (collision, carrier-sense, etc) while creating a completely different and new medium access control (MAC) method. PLCA function does not belong in RS.

SuggestedRemedy

Move PLCA outside of RS (which only translates MII signals to PLS signals, for the dataplane as well as control like EEE states, not a new media access control method. And if necessary, revise CSD and objectives as appropriate.

Response Response Status W

REJECT.

See comment #637 for rationale.

CI 148 SC 148.4.4.1.2 P 178 L 51 # 602
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

"thus request, the PHY shall assert the CRS..." has two problems. What PHY is "the PHY", and how does PHY assert CRS in accordance to CL148 state diagram

SuggestedRemedy

Please fix it. If fixable.

Response Response Status W

ACCEPT IN PRINCIPLE.

Solved by #603 and #649

CI 148 SC 148.4.4.1.2 P 178 L 51 # 603
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

"A Commit request shall not.. PHY. RX_DV.." has two problems. What PHY is "the PHY", and how does the PHY know not to assert RX_DV signal in accordance to CL148 state diagram.

SuggestedRemedy

Please fix it. If fixable.

Response Response Status W

ACCEPT IN PRINCIPLE.

As stated in the same subclause "PHY specifications are free to map the COMMIT request to any suitable line coding as long as the requirement defined herein are met."

The purpose of this sentence is to ensure that whatever mapping is chosen in specific PHY clauses for the COMMIT request, this one is not interpreted as normal data (asserting RX_DV).

Suggested resolution should clarify this better.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #comment number in the right boxes.

NOTE: CRS assertion is not to be specified here (it's implicit in CRS definition). See resolution of #649

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

CI 148 SC 148.4.4.1.3 P 179 L 8 # 291
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

The reference 22.2.2.8 is part of this draft, so should not be in green font. 22.2.2.8 itself does not clearly describe how, in combination with 148.4.4.1.3, performs early receive indication.

SuggestedRemedy

Please fix font and clarify in CL22 or here.

Response Response Status W

ACCEPT IN PRINCIPLE.

This text has been deleted by changes marked #649 in Clause_148_r2p0_resolution.pdf.

CI 148 SC 148.4.5.1 P 180 L 11 # 570
Laubach, Mark Broadcom

Comment Type TR Comment Status A PLCA

"PLCA control variables". Where are these? Suggest xref'ing to the appropriate subclause, e.g. 148.4.5.2. The more significant problem is that there is I can't find the term "default" and/or "default value" for any variable in 148.4.5.2. Please indicate in 148.4.5.2 what the default value is for each variable or consider providing a table somewhere appropriate with specific variables and their corresponding appropriate default value to make this statement correct.

SuggestedRemedy

Add the appropriate default value for each variable in 148.4.5.2 as referred to by the paragraph at line 11.

Response Response Status W

ACCEPT IN PRINCIPLE.

This text is not supposed to be normative, but rather a description of the normative state diagram in Fig 148-4 and 148-5.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #comment number in the right boxes.

CI 148 SC 148.4.5.1 P 181 L 50 # 604
KIM, YONG NIO

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE

PLCA Control state diagram (Fig 148-5) and related text seems to describe Token bus-like medium access control function (without details on how the token (BEACON) is initialized, how duplicate tokens are handled (duplicate nodeID=0), how lost token (null nodeID=0) is handled). This is NOT appropriate function for RS (CL22) layer that conveys (translates) signals between PLS and MII

SuggestedRemedy

Move CL148 function so CL4 MAC Clause where it belongs. Make appropriate changes to CRD and objectives list, if deemed needed.

Response Response Status W

REJECT.

See comment #637 for rationale.

CI 148 SC 148.4.6.1 P 187 L 54 # 605
KIM, YONG NIO

Comment Type TR Comment Status R t Item HALF_DUPLEX_802.1

PLCA Data state diagram (Fig 148-6) introduces a new behavior WRT media loopback when transmitting. Prior to CL148, CL4 half-duplex MAC reflects all TX packets back to RX (reflected by the half-duplex medium). CL4 full-duplex MAC does not reflect any TX back to RX. There is recognized inconsistency in 802.1 MAC Services definition (e.g. thought experiment -- how does broadcast frame transmitted by a bridge to a half-duplex medium behave as per std, and how does a system actually behave)? This statemachine introduces a new behavior for the half-duplex MAC, where the TX is not reflected back to RX. An EXISTING system that is not aware of 802.3cg behavior would IGNORE (with half-duplex MAC) RX when it is also TX, when in fact RX is independant transmission that must be received (otherwise packet was transmitted to the network and lost silently by being ignored (reflected)).

SuggestedRemedy

While the 802.1 MAC services issues has nothing to do with 802.3cg scope, the 802 and 802.3 compatibility is IN scope, because by introducing a different behavior. Existing systems (MACs and Bridges) would potentially not process any RX that is coincidental with its own TX. Please fix it, if fixable. 802.1 MAC Services maintenance change may be required be reviewed together with this issue.

Response Response Status W

REJECT.

PLCA is compatible with the clause 4 MAC as specified in 802.3. Maintenance on clause 4 or other Standards is outside the scope of this project. The P802.3cg Task Force Chair will forward this comment to 802.3 Maintenance for consideration.

Implementation Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced Pair of

CI 45 SC 45.2.1.186c.4 P 42 L 44 # 337
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R PMA

The behavior coming out of sleep is not implementation specific, it is governed by what happens upon reset.

SuggestedRemedy

Fix text.

Response Response Status U

REJECT.

While often confused with sleep mode or EEE mode, low-power mode is neither. It is a standard low-power state where the PHY is only responsive to MDIO, and exit requires a reset (and therefore retraining, per the PHY control diagram). It is mirrored in the PMA control bit 1.0.11, the PMA/PMD control 1 register - common to most PHYs. The low-power mode functionality specified in 802.3cg is specified in other PHY clauses throughout 802.3, including clause 28, clause 36, clause 37 and clause 97 (1000BASE-T1), with identical or nearly identical specification of the implementation-specific nature of the function.

Commenter and Chair are encouraged to submit a maintenance request to deal with this confusion globally.

CI 146 SC 146.8.1 P 152 L 34 # 407
Jones, Peter Cisco

Comment Type TR Comment Status R Big Ticket Item MDI

The IEC 63171-1 connector was prematurely added to the draft, and should be removed. Comments against D1.0 (#571, #572, #617, #618) requested that IEC 63171-1(MICE1) & IEC 61076-3-125 (MICE3) be defined for both T1-L and T1-S (as listed in "SC25 WG3 Interim Update Report for 802.3 Sept 2018.pdf"). Comment resolution for D2.0 only added IEC 63171-1(MICE1) for T1-L making the draft internally inconsistent (T1L vs T1-S) and also inconsistent with the liaison from S25/WG3.

I am not aware of any public review or assessment performed on these connectors outside that done in ISO/IEC SC25/WG3. I am also not aware of the membership of ISO/IEC SC25/WG3, or if it's detailed assessments are publically available.

The only presentation to 802.3cg that I can find providing significant details is pelletier_3cg_01_0918.pdf presented in Spokane. While it addresses IEC 63171-1 limits for IL, RL, TCL and TCTL, I don't see any information about other key parameters (e.g., mechanical characteristics, relative costs of different solutions) that are needed to make an informed decision

Given the importance of connector selection to the success of BASE-T1 in building/industrial automation, I believe that we should remove this paragraph and the accompanying note from the draft, and consider the best way to perform connect selection that can engage important ecosystem partners (e.g. system vendors, system integrators) who were not part of the ISO/IEC SC25/WG3 process.

SuggestedRemedy

Delete lines 34 to 45 in "146.8.1 MDI connectors". This is the second paragraph and the accompanying editor's note.

Response Response Status U

REJECT.

Commenter was part of extensive discussion and resolution of the comment on draft 2.0. Liaison reports have documented discussion on connectors in IEC (mechanical specifications) and ISO/IEC, where membership is well known as being by country and national TAGs are open to participation.

Comment 617 on draft 2.0 put in this text was resolved by motion with a vote of Y:23 N:2 A:3

Comment 409 was accepted at the November 2018 meeting with broad consensus to address these issues.